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THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Shuichi Kikuchi et al. Art Unit : 2813
Serial No. : 10/651,855 Examiner : Thanh Nguyen
Filed : August 29, 2003
Title : SEMICONDUCTOR DEVICE AND METHOD OF MANUFACTURING IT

Mail Stop Amendment

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY TO ACTION OF SEPTEMBER 27, 2005

In reply to the Office Action of September 27, 2005, Applicants submit the following remarks.

Claims 1-3 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,932,897 (Kawaguchi et al.). Applicants respectfully disagree with that rejection.

Claim 1 recites a drain region, a drift region and an impurities layer. The drain region is in direct contact with the drift region and the impurities layer is adjacent to the drain region. The impurities layer is more highly doped than the drift region.

An example of those features is disclosed in FIG. 7 where drain region 12 is in direct contact with drift region 4 and impurities layer 7A is adjacent to the drain region 12. The illustrated impurities layer 7A (FP) is more highly doped than the drift region 4 (LP). In certain implementations, the features recited in claim 1 can improve a transistor's on-state resistance without adversely affecting its withstand voltage. The Kawaguchi et al. patent does not disclose or suggest those features.

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